

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Steven J. LOCKE and Devanand PINTO

Title: QUANTITATIVE ANALYSIS VIA
ISOTOPICALLY DIFFERENTIATED
DERIVATIZATION

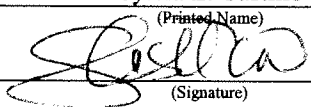
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Art Unit: 1641

Confirmation 2039
Number:

<p>CERTIFICATE OF ELECTRONIC TRANSMISSION</p> <p>I hereby certify that this paper is being electronically transmitted to the United States Patent and Trademark Office, Alexandria, Virginia via EFS-Web on the date below.</p> <p>Sylvia L. Castillo (Printed Name)</p> <p> (Signature)</p> <p>December 18, 2007 (Date of Transmission)</p>

AMENDMENT AND REPLY UNDER 37 CFR 1.111

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This communication is responsive to the Non-Final Office Action dated July 18, 2007, concerning the above-referenced patent application. The Action set a 3-month period to reply. This Amendment, together with a 2-month extension of time, is timely filed on or before its due date of December 18, 2007.

Amendments to the Specification are reflected on page 2 of this document.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this document.

Remarks/Arguments begin on page 8 of this document.

Amendments to the Specification:

Please replace paragraph [00126] with the following:

[00126] Various amines, shown as Compounds in Table 2, were labelled with either CH₂O or CD₂O and reduced with sodium cyanoborohydride or sodium cyanoborodeuteride in acetonitrile which contained 10% (v/v) acetic acid or acetic acid d₄. Various amounts of each labelled amine sample were mixed and analysed by LC-MS. No digestion was required, as the labelled amines molecules were small. The MS used was a triple-quadrupole instrument (API III+) with an IonSprayTM Source source operated in the positive-ion mode. Table 2 provides the details of the analysis. Column 1 lists the names of the amines that were labelled. Column 2 lists the mass of the protonated pseudo-molecular ion. Columns 3 and 4 list the amount of differentially labelled amine combined for the analysis. Columns 5 and 6 list the expected and experimentally determined ratios, respectively. Finally, column 7 lists the calculated percent error. FIG. 8 shows the molecular structure of the amines. The lower panel shows the mass spectrum of 3-aminothiophenol labelled with CH₂O (m/z=123.0) and CD₂O (m/z=127.0) and NaCNBH₃. The expected ratio of intensities was 1.07 and the observed ratio was 1.10, corresponding to an error of 2.7%.